

# THIR UNIVERD STRAYES OF AMERICA

TO ALL TO WHOM THESE; PRESENTS; SHATE COME;

Syngenta Seeds, Inc.

MINIOUS, THERE HAS BEEN PRESENTED TO THE

# Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TIFLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLEMISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE SHIT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR TING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE LARPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN, GARDEN

'Carson'

In Testimonn Thereof, I have hereunto set my hand and caused the seal of the Hunt Hariety Frotestion Office to be affixed at the City of Washington, D.C. this ninth day of April, in the year two thousand and seven.

Allast.

82-3-

Commissioner Plant Variety Protection Office Agricultural Marketing Service he hanne Juliure

ST-470 (02-10-2003) designed by the Plant Variety Protection Office using Word 2000. Replaces former versions of ST-470.

I See reverse for instructions and information of

200400034

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filling fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the application all application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

#### Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

#### ITEM

18a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
- (2) the details of subsequent stages of selection and multiplication;
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
  - (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.
- 21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)
- 23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/isg/seed.htm

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, saxual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete

# 22. Sale, disposition, transfer of use of Carson:

Country: France

1998: Internal (Novartis/Syngenta) variety trial

1999: Stock seed transferred to Novartis (Syngenta) France

1999: Commercial product transferred to Novartis (Syngenta) France for sales

beginning in 2000.

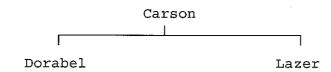
Country: US

Dec. 4, 2002: Commercial Sale in US

#### Exhibit A

## Origin and Breeding History

'Carson'



The pedigree trace of 'Carson' is shown above. 'Carson' originated from the hand-pollinated cross between the commercial varieties Dorabel and Lazer made in France in 1988.

The pedigree selection method of breeding was employed from F2-F7. The selection criteria were upright plant habit and improved uniform yellow pod color.

The F8 generation plant row was bulk harvested to begin seed increases. 'Carson' has been uniform and stable for four generations of increases from the original F8, being free of off-types and variants.

#### Exhibit B

#### Novelty Statement

#### 'Carson'

'Carson' is a bush wax bean that most closely resembles the variety 'Goldrush'. 'Carson' differs from 'Goldrush' in that 'Carson' is resistant to Anthracnose Race 7 whereas 'Goldrush' is susceptible.

Below are the results of a detached leaf assay test using Anthracnose Race 7 done on twenty plants at Stanton, MN in December 2002. Disease incidence was scored on a 0-9 scale where 0 is immune and 9 is highly susceptible.

										Pla	ant N	lum	ber									<u>l</u>
Plot	Variety Name	01	02	03	04	05	06	07	80	09	10	11	12	13	14	15	16	17	18	19	20	Mean
901	Labrador *	1	1	1	1	1	2	1	2	1	2	1	1	2	1	2	1	1	2	1	1	1.32
905	Early Gallatin**	7	9	8	8	8	8	9	9	8	9	8	8	9	8	7	8	9	8	8	-8	8.26
926	Carson	1	1	1	2	2	1	2	1	1	2	1	1	1	2	1	1	1	1	1	1	1.26
927	Goldrush	9	9	8	8	9	9	8	8	9	9	9	9	9	9	8	9	9	9	9	8	8.68

<sup>\*</sup>Resistant Check

<sup>\*\*</sup>Susceptible Check

> plt #		2	3	4	5	9	_	8	6	10	1	12	13	14	15	16	17	18	10		Ş
Variety Name							$\dagger$					!	2		2	2	-	2	2	20	ם >
Labrador	1		Υ-	_	2	-	-	_	~	T-	~	-	-	-	-	+	+	+-	1~	-	1 16
Early Gallatin	6	8	8	8	8	σ.	တ	0	80	6	80	8	6	8	8	0	6	6	1 6		8 37
Carson	7	2	1	7	7-	2	4-	-	2	-	-	-	~	-	2	_	<b>-</b>	-	+ -		2
Soldrush	6	6	6	6	6	6	6	0	6	6	6	6	6	6	6	6	6	6	6	6	6

inoculated on 1/26/07 detached leaf method Read 1/31/07

Race 7 anthracnose test for PVP

13:09 No.006 P.02

CHASON

AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY DIVISION PLANT VARIETY PROTECTION OFFICE **BELTSVILLE, MARYLAND 20705** 

(Garden Bean)

## **OBJECTIVE DESCRIPTION OF VARIETY**

GARDEN BEAN (Phaseolus vulgaris L.)

name of applicant(s)	FOR OFFICIAL USE ONLY
	PVPO N2MBED 4 0 0 0 3 4
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)	VARIETY NAME
	١ ا
	Carson
	TEMPORARY OR EXPERIMENTAL
	DESIGNATION
PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number th	
on a minimum of 100 plants. Comparative data should be determined from varieties entere	or less respectively. Data for quantitative plant characters should be based d in the same trial. Measured data should be for SPACED PLANTS. Range
abould also be given. Royal Horticultural Society or any recognized color standard may be Please answer all questions for your yar	e used to determine plant colors; designate system used:
I. TYPE:	
1 = Garden 2=Snap 3 = Flage	colet 4 = Romano
2 J-Garden 2-Snap 3-Frage	With A Loman
2. MARKET MATURITY:	
Days to edible pods	Comparison varieties
	1='Tendercrop' 2='Kentucky Wonder'
Heat units to edible pods	3='Goldrush' 4='Slenderette'
Number of days earlier than	
<u> </u>	5='Gitana' 6='Provider'
Same number of days as 5	7='Bush Blue Lake 290' 8=Other (specify below)
Number of days later than 1	GOLDRUSH
3. PLANT:	
cm Spacing between plants in a row	•
Habit 1=Determinate	
2=Indeterminate, erect	stem and branches veak and prostrate stem and branches
4-Indeterminate climb	ing habit with weak, long and twisted stem and branches
0 5 1 cm Height	
\30 cm Shorter than 2	
	NOT THE SAME AS ANY COMPARISON
	leat (95 a) with the A leaves of
o 3 cm Taller than	Use Comparison Varieties from Section 2.
46 cm Spread	
cm Narrower than	Please make all 3 comparisons for
	Height and Spread
Same width as	NOT NATIONAL OF SAME WIDTH
OH cm Wider than 8	As any compasion
who was the second of the seco	

May 08 96

13:10 No.006 P.03

Plant Var. Prot. Offic TEL:301-504-5518

Plant Var. Prot. Offic TEL:301-504-5518

May 08 96

13:10 No.006 P.04

	•	Prot. (	Offic TEL:301-	504-5518	3	May O		13:11 No. Exhibit C	.006 P.05 (Garden Bean) Page 4
		Hilum vie	I-Elliptical	•	2-Oval		3=Rou		0034
	4	Cross sect	ion 1=Elliptical	2=Ov	al 3-Core	late 4=1	Round		
		Side view	1-Oval to Ob	long	2=Round		3=Renifor	m	
	23	gm/100 Se							
	03	gm/100	Seed same as	少 <b>3</b>		Comparison se make all 3		om Section 2.	
10. DIS		ISTANCE:	0 = Not Tested PLEASE SPECIFY	1 - Suscept		lesistant RE APPROP	3 = Interm	ediate 4	= Tolerant
		Anthracno	se (Colletotrichum lin					<b>!</b> !	
	٠	- 2	Race Alpha	П	Race Beta	1	Ra	ce Gamma	
			Race Delta	Ħ	Race Epsilon	1	Ra	ce Lambda	÷
	Ø	Bean Rust	Race Kappa (Uromyces appendicus	latus)	specify race_	<u>R7</u>			
		Race 3		e 39 e 46	Race	1		ee 44 ee 50	
		Race 5	<b></b>	e 52 lify race	Race	54	Ra	ce 56	
1	<u> </u>	Powdery M	ildew <i>(Erysiphe poly</i> g	oni)					
	0	Fusarium P	Root Rot <i>(Fusarium sa</i>	olani I. sp. ph	aseoll)				
	0	Pythium Ro	oot Rot (Pythiam spp.,	)	: · · · · · · · · · · · · · · · · · · ·		·		
I	0	Aphanomy	es Root Rot (Aphano	myces euteic	hes)				
ſ	<u></u>	Rhizoctonia	Root Rot (Rhizocton	la solani)					
	<u> </u>		ght or Aerial Pythium						
\	<u>ତ</u> ୍ତ		ef Spot <i>(Isariopsis gri</i> ille <i>(Corynebacterium)</i>			cumfaciens)_			
		* P * 140 (\$4600)	A TO CHARLEST CHARLES WAS ASSETTLED BY	1946年20日代17年17年17年17年	and the residence of the first	中心的原则可能是特殊	108 FARSON (\$1)	ATTACHER ATTACH	

10. DISEASE RE	RESISTANCE: (continued)	1034
4	Bacterial Brown Spot (Pseudomonas syringae pv. syringae)	
0	Common Bacterial Blight (Xanthomonas campestris pv. phaseoli)	
O	Halo blight (Pseudomanas syringae pv. phaseolicola)	
	Race 1 Race 2 Other (SPECIFY)	<del></del>
0	Clover Yellow Vein Virus (CYVV)	
0	Bean Common Mosaic Virus (BCMV)	
	BV1 NY15 NL2 NL3	
	NL4 NL8 Florida Idab	
	Mexican Western Type	
	Other (SPECIFY)	
0	Yellow Bean Mosaic Virus (BYMV)	
0	Curly Top Virus (BCTV)	
	Other (Specify Disease and Race or Strain)	
1. INSECT RES	SISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate	4 = Tolerant
0	Aphid Root Knot Nematode	
o	Leafhopper Seed Corn Maggot	
0	Lygus Thrips	
0	Pod Borer Weevils	•
Ø	Other (SPECIFY)	<u></u>
2. PHYSIOLOGI olerant	GICAL RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermed	diate 4=
0	Heat C Cold Drought	
o	Air Pollution Ozone	
0	Other (SPECIFY)	· · · · · · · · · · · · · · · · · · ·
3. COMMENTS:	S:	

Plant Var. Prot. Offic TEL:301-504-5518

### STATEMENT OF THE BASIS OF APPLICATION OWNERSHIP

The variety, Carson, is the result of a hand-pollinated cross between Dorabel and Lazer. The variety, Carson, for which Plant Variety Protection is hereby being sought, was developed by Elie Marx, an employee of Syngenta Seeds, Inc. – Vegetables (S&G). By agreement between the employees and Syngenta Seeds, Inc. – Vegetables, all rights to any invention, discovery or development made by the employee while employed by Syngenta Seeds, Inc. – Vegetables are assigned to Syngenta Seed, Inc. – Vegetables with no rights of any kind retained by the employees.

REPRODUCE LOCALLY. Include form number and edit	tion date on all reproductions.	ORM APPROVED - OMB No. 0581-0055
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE  EXHIBIT E	Application is required in order to detectificate is to be issued (7 U.S.C. 24 confidential until the certificate is issued.	ermine if a plant variety protection (21). The information is held
STATEMENT OF THE BASIS OF OWNERSHIP		
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Syngenta Seeds, Inc Vesetables		Carson
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (Include area code)	6. FAX (Include area code)
600 North Armstrong Place Boise, ID 83704	208-465-8522	208-467-4559
	7. PVPO NUMBER	
	200400034	
9. Is the applicant (individual or company) a U.S. national or a U.S. b	pased company? If no, give name of co	ountry. YES NO
10. Is the applicant the original owner?	NO If no, please answer <u>one</u>	of the following:
a. If the original rights to variety were owned by individual(s), is (	(are) the original owner(s) a U.S. Nationa NO If no, give name of countr	
11. Additional explanation on ownership (Trace ownership from origin Same as on original application.	NO If no, give name of country	
Garden Bean, Carson, was bred and developed by plant breeders en Syngenta Seeds, Inc., all rights to any invention, discovery or develop assigned to Syngenta Seeds, Inc., with no rights retained by the emp	pment made by the employee while emp	eement between the employee and loved loyed by Syngenta Seeds, Inc. were
PLEASE NOTE:		
Plant variety protection can only be afforded to the owners (not licens	sees) who meet the following criteria:	
If the rights to the variety are owned by the original breeder, that penaltional of a country which affords similar protection to nationals of	erson must be a U.S. national, national of the U.S. for the same genus and specie	of a UPOV member country, or es.
<ol><li>If the rights to the variety are owned by the company which employ nationals of a UPOV member country, or owned by nationals of a c genus and species.</li></ol>	red the original breeder(s), the company country which affords similar protection to	must be U.S. based, owned by particular or nationals of the U.S. for the same
3. If the applicant is an owner who is not the original owner, both the $\boldsymbol{\alpha}$	original owner and the applicant must m	eet one of the above criteria.
The original breeder/owner may be the individual or company who dir Act for definitions.	ected the final breeding. See Section 4	1(a)(2) of the Plant Variety Protection
According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, control number. The valid OMB control number for this information collection is 0581-0055. including the time for reviewing the instructions, searching existing data spurges, gathering a	The time required to complete this information collect and maintaining the data needed, and completing and	ion is estimated to average 0.1 hour per response, reviewing the collection of information.
The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and as status, familial status, parental status, religion, sexual orientation, genetic information, politics program (Not all prohibited bases apply to all programs.) Persons with disabilities who require should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).	al beliefs, reprisal, or because all or part of an individu	sal's income is derived from any public assistance

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE **SCIENCE AND TECHNOLOGY** PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

**EXHIBIT F** DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	TEMPORARY OR EXPERIMENTAL DESIGNATION
Syngenta Seeds, Inc Vegetables	600 North Armstrong Place	
	Boise, ID 83704	VARIETY NAME: 10.
	03/04	Carson
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	FOR OFFICIAL USE ONLY
Kim Briggs	6338 Highway 20-26	PVPO NUMBER
	Nampa, ID 83687	200400034

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

<u>03-06-200</u> Date